



**City of Long Beach Department of Health and Human Services
Public Health Laboratory**

2525 Grand Avenue, Room 260
Long Beach, California 90815
Phone: (562) 570-4080 | Fax: (562) 570-4070

Miriam Lachica, MA
Laboratory Services Officer

CLIA: 05D0688088
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Zika Virus (ZIKV) Diagnostic Specimen Testing Guidelines

Important Resources	<p>Please visit the Long Beach Health Department website for updates and latest information on Zika virus:</p> <p>http://longbeach.gov/health/</p> <p>http://longbeach.gov/health/services/directory/diseases-and-other-public-health-hazards/zika-virus/</p>
Description	<p>Available send-out tests include IgM ELISA, viral culture, Reverse Transcriptase PCR, and PRNT (Plaque-reduction neutralization test).</p>
Pre-Approval Required	<p>In the City of Long Beach, consultation and prior approval is required from the City of Long Beach Department of Health and Human Services (CLB DHHS) Public Health Laboratory in consultation with the Epidemiology/Communicable Disease Program. The Public Health Laboratory can be contacted at (562) 570-4080 Monday through Friday from 8:00 am to 5:00 pm. During after hours, weekends, or holidays, please contact the Communications Center at (562) 435-6711 or Mimi Lachica, Laboratory Services Officer, at (562) 881-5492.</p> <p>For outside jurisdictions, prior approval is also required by calling the above numbers.</p>
Required Form(s), Reporting, and Supplemental Information	<p>The CLB DHHS Public Health LABORATORY TEST REQUEST FORM is available at:</p> <p>http://longbeach.gov/health/media-library/documents/services/clinics/public-health-laboratory/laboratory-test-request-form/</p> <p>The Long Beach Public Health Laboratory will be completing the CDC DASH Form (CDC Form 50.34) based on information provided in the Long Beach Public Health Test Request Form.</p> <p>Test requests must be accompanied by the following clinical information gathered by the requesting physician:</p> <ol style="list-style-type: none">1. Patient's clinical history, including a description of the clinical illness (e.g., fever, maculopapular rash, arthralgia, conjunctivitis), onset date, and flavivirus vaccination history (yellow fever and/or



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Acceptable Specimen Type(s) and Minimum Volumes

Japanese encephalitis virus [JEV] vaccination). Please see the Interferences & Limitations section below for more information.

2. Complete travel history. Specify all locations and include date(s) travel started and date(s) travel ended.
3. Pregnancy status.
4. Results of previous or concurrent relevant testing (e.g., TORCHS^a, chikungunya, dengue, West Nile virus, etc.).

^aTORCHS screen includes toxoplasmosis, rubella, cytomegalovirus (CMV), herpes, HIV, and syphilis.

Suspected Zika infections should be reported immediately to the CLBDHHS Epidemiology/Communicable Disease Control Program at:

Phone: (562) 570-4302 or Fax: (562) 570-4374

Storage/ Transportation Conditions

For acute illness (≤ 7 days), RT-PCR is the preferred diagnostic method. Serology should be used for samples collected at 4 or more days after illness onset.

Blood: 5 mL red top or gold top serum separator vacutainer tube (plastic).

CSF: 1-2 mL in a sterile, leak-proof, screw cap plastic tube.

Paired acute and convalescent blood samples are requested for serology. Acute and convalescent serum must be tested concurrently for optimal results. Collect specimens 2 to 3 weeks apart.

Additional samples such as amniotic fluid, cord blood, fetal specimens, tissue, or urine may be accepted upon consultation with the Long Beach Public Health Laboratory.

Specimen Labeling

Store samples at 4-8°C. If the specimen is delivered in less than 72 hours from the collection date, the specimen may be sent on a cold or ice pack. If 72 hours or more have elapsed since the collection date, the specimen should be frozen and shipped on dry ice. Frozen serum specimens must be spun, separated, and aliquoted to a sterile, leak-proof, screw cap plastic tube.

The specimen must be labeled with the patient's full name (Last, First, Middle Initial), DOB, MRN, date collected, and time collected.



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Shipping Instructions and Specimen Handling Requirements

Do not send specimens to the Public Health Laboratory without prior consultation and approval from the Public Health Laboratory. Samples without prior approval and complete paperwork will not be tested. Do not send specimens directly to the California Department of Public Health (CDPH) or the Centers for Disease Control and Prevention (CDC).

For questions related to sample requirements, please call the CLB DHHS Public Health Laboratory at (562) 570-4080 during business hours of 8 am to 5 pm. After business hours, weekends, or holidays, please contact the Communications Center at (562) 435-6711 or Mimi Lachica, Laboratory Services Officer, at (562) 881-5492.

Performing Laboratories

For serology, culture, and RT-PCR:

CDC Division of Arboviral
and Vector-Borne Diseases
3156 Rampart Road
Fort Collins, CO 80521

For PRNT:

CDC Infectious Disease
Pathology Branch
1600 Clifton Road, NE
Atlanta, GA 30333

Turnaround Time

CDC's turnaround time may vary from two to six weeks. Samples requiring serology confirmation by PRNT will take additional time to report.

Interferences & Limitations

ZIKV IgM antibodies may be detected after 3 days post-onset of symptoms but may not develop during the first 7 days of illness. A convalescent specimen may be required. ZIKV IgM may persist for months and may cross react with other arboviruses leading to false positive IgM ELISA serology results. Additional confirmatory testing by PRNT is required.

Immunization against yellow fever or Japanese Encephalitis viruses, as well as past infection with other arboviruses, such as West Nile virus or St. Louis Encephalitis virus, may complicate the interpretation of serology results, as ZIKV IgM ELISA and PRNT have extensive cross reactivity to these other flaviviruses.



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Reference Range	
	Cases of GBS were reported among some persons with ZIKV in the French Polynesia ZIKV outbreak in 2013-2014, and an increase of GBS cases has recently been noted in some South American countries where ZIKV outbreaks are ongoing. Whether ZIKV infection and GBS are related is still not clear and is being investigated.
	Not Detected